Metallurgical Engineers

claiborn80@aol.com
450 Cooper Road,
Hope Hull, AL 36043
334-318-4192,
205-247-5363

Cher R. Claiborn

Objective

To obtain a fulfilling full-time position in the metals or materials manufacturing industry.

Education

Bachelor of Science Candidate: Metallurgical Engineering
The University of Alabama, Tuscaloosa, Alabama
Expected Graduation: May 2003

Design Projects: Effect of Iron and Silicon on Weld Properties in Cast Gamma Titanium Aluminides, The Effect of Phosphorus Content on The Mechanical Properties of Inconel 718, The Effect of Welding Parameters on Resistance Spot Welded Galvannealed Steel, Production of Zero-Valent Iron Nanoparticles for Incorporation in Membranes for Degradation of Trichloroethylene.

Experience

Undergraduate Research Assistant, Summer 2001-Present
The University of Alabama, Metallurgical Engineering Department, Tuscaloosa, Alabama

Autopolished and etched galzanized steel, nickel superalloys and titanium-aluminide samples. Performed microhardness testing and EDX analysis on titanium-aluminide and nickel samples to determine mechanical properties. Observed grain structure and orientation using scanning electron microscopy and light microscopy. Recorded and organized experimental results and procedures for future research and publication. Analyzed and prepared research papers and presentation. Demonstrated and explained use of all laboratory equipment to new employees and visiting faculty members.

Undergraduate Research Assistant, summer 2002-Present
The University of Alabama, Chemical Engineering Department, Tuscaloosa, Alabama

Performed literature review and analysis. Synthesized unoxidized iron nanoparticles by varying the concentrations of reactants in a filter flask vacuum setup. Prepared samples for scanning electron microscopy. Performed materials characterization using transmission electron microscopy and EDS. Implemented new procedures to create zero valence iron nanoparticles in a reverse micelle using surfactants. Analyzed and recorded experimental procedure and results for further development and improvement.

Leadership/Skills

President of ASM/TMS Student Chapter, Vice-President of ASM/TMS Student Chapter, Member of The Foundry Education Foundation, ASM International/TMS, National Society of Black Engineers, Society of Women Engineers

Honors/Achievements

Department of Met. Eng. 2003 Capstone Engineering Society Outstanding Senior
Citation Corporation Scholarship Recipient
Foundry Education Foundation Undergraduate Scholarship

References

Available upon request

Flávia Cunha Duncan

e-mail: flavia.duncan@ua.edu

home: (205) 345 0502
lab: (205) 348 7459
fax: (205) 348 2164

632 23rd Street East – Apt. 16C
Tuscaloosa, AL 35401

Objective: To obtain a challenging position in the materials production industries.

Education:

Doctor of Philosophy in Metallurgical and Materials Engineering, *The University of Alabama*, Tuscaloosa, AL.
To be concluded in May, 2003. Cumulative GPA: 4.0

Master of Science in Metallurgical and Materials Engineering, *The University of Alabama*, Tuscaloosa, AL.
August, 2001

Bachelor of Science in Materials Science and Engineering, *Federal University of São Carlos*, São Carlos, SP, Brazil. December, 1997

Career Related Experiences:

UNIVERSITY OF ALABAMA, Tuscaloosa, AL. *Graduate student*: Aug 1998 – present.

Research:

- Studied the fundamental concepts of equilibrium phase diagrams for formation of Mg-Al spinel.
- Synthesized Mg-Al spinel refractory aggregates from several natural raw materials, including clays and bauxites.
- Synthesized Mg-Al spinel and forsterite refractory aggregates from sillimanite minerals.
- Advanced the synthesis of mullite from clays.
- Determined the kinetics of reaction formation of Mg-Al spinel and forsterite refractory aggregates from mullite and periclase of different particle sizes.
- Advanced the reaction formation of stoichiometric spinel, mullite, forsterite and enstatite from nanopowders.
- Studied the principles of solid-state reactions.
- Addressed the phenomenon of expansion during the solid-state reaction formation of spinel.

Teaching:

- Assisted seniors, juniors and sophomores with the concepts of how structure determines properties.
- Conducted lectures and review sessions.

Others:

- Interacted with personnel from the industry assisting them in the characterization of materials (refractories and metals) resulting from failure processes.
- Assisted technical personnel from Corus Tuscaloosa in the microscopic characterization of various materials a conducted serious work in the optical microscopic analysis of inclusions.
- Monitored teachers and high school and college students during technical demonstrations.

POLIBRASIL RESINAS, São Paulo, SP, Brazil. *Trainee*: Jan 1998 – Jul 1998.

- Conducted functions in the fields of logistic and production line of poly-propylene.

COMPANHIA SIDERÚRGICA NACIONAL (CSN), Volta Redonda, RJ, Brazil. *Intern*: Jan 1997 – Dec 19

- Conducted investigations of mechanical properties in carbon magnesia bricks.
- Studied the application of slag for highways and railroads.
- Tested and designed refractories for suitable applications in the steel mill.
- Assisted the monitoring of radioactive rods placement in the lining during repair of blast furnace.

Shenavia Wilkerson Howell

Current Address
925 17th Ave E Apt 1018
Tuscaloosa, AL 35404
(205) 553-5739

Permanent Address
800 Martin L King Dr
Linden, AL 36748
(334) 295-4884

Email Address
shenavia_w@yahoo.com

Objective

To secure a challenging entry-level position in the manufacturing industry.

Education

Tuscaloosa, AL

The University of Alabama
Master of Science, Metallurgical and Materials Engineering, August 2002

Courses: Engineering Statistics, Engineering Materials II: Synthesis, Processing, and Performance, Physical Metallurgy, Metallurgical Thermodynamics, Elasticity, Mechanical Behavior of Materials, Advance Physics of Metals, Analytical Methods of Materials, Scanning Electron Microscopy (SEM), Engineering Statistics
Cumulative GPA: 3.57/4.0

Related course work and projects:

- Determined the effect of age hardening aluminum 6061 and 2014 alloys. Heat treatment procedures were determined, and the strength was measured using Rockwell hardness and tensile testing.
- Determined the effect of grain size on A36 steel
- Used linear regression to determine which of the seven skin fold measurements are the best to predict body density of men and women
- Identified an unknown powder using X-ray diffraction techniques and SEM

Tuscaloosa, AL

Stillman College
Bachelor of Science (BS), Chemistry, May 2000

Courses: General Chemistry, Organic Chemistry, Analytical Chemistry, Physical Chemistry, Calculus I, II, III, IV, Differential Equations
Cumulative GPA: 3.85/4.0

Experience

Graduate Assistant, The University of Alabama, November 1999-Present
Supervisor: Dr. Viola Acoff

- Performed bead-on-plate, spot, and butt welds on gamma TiAl sheet material
- Mounted, polished, and etched samples
- Characterized samples using light microscopy, SEM, and Knoop microhardness
- Assisted with Physical Metallurgy laboratories
- Graded homework assignments

FENG HUANG

Box 870202
Department of Metallurgical and Materials Engineering
University of Alabama
Tuscaloosa, AL 35487-0202
(205) 348-0855

419 8th Ave NE
C
Tuscaloosa, AL 35404
(205) 462-1454
Feng.Huang@UA.edu

Objective

To obtain an R&D position focused on **processing and characterization of thin films/multilayers:** mechanical and structural characterizations; thermo-mechanical behavior (stress/strain, dislocation- and diffusion-mediated plasticity, microstructural stability, etc.); interfacial effects; thin film reactions.

Education

98-present University of Alabama, Tuscaloosa, AL
Ph. D. candidate in Metallurgical and Materials Engineering (Expected May 2003)
Advisor: Dr. M. L. Weaver
Dissertation: "Mechanical characterization and oxidation characteristics of magnetron sputtered amorphous titanium diboride thin films"
Awarded **M. S.** in Metallurgical and Materials Engineering, May 2001

9/89-7/93 East China Institute of Metallurgy, Anhui, China
B. E. in Metallurgical Engineering, July 1993.

Research Experience

98-present Research assistant, University of Alabama, Tuscaloosa, AL

- Devised x-ray reflectivity technique (experiment & simulation) to study oxidation characteristics of ultrathin TiB_2 films at low temperatures, and interfacial reactions between thin metal and polymer films.
- Investigated mechanical response of sputtered TiB_2 and TiAlCr(N) thin films, and FeCoNi electrodeposits, using nanoindentation and wafer curvature measurements.
- Probed and analyzed microstructure of TiAlCr(N) and Ti-B-N films, using XRD, AFM, TEM, and electrical resistivity measurements.
- Synthesized TiAlCr, NiAlHf, FeCrAlY, CrAlY, and NiCrAlY coatings by magnetron sputtering for Dr. M. Brady of the Oak Ridge National Laboratory (ORNL).

Teaching Experience

Fall 2000 Teaching assistant and lab supervisor, Analytical Methods for Materials

Work Experience

8/93—8/95 Processing engineer, Tubing Mill, Baoshan Iron & Steel Corporation, Shanghai, China

Honors

2002-03 AY University of Alabama, Graduate Council Thesis/Dissertation Fellowship

Publications

[1] **F. Huang**, W. J. Liu, J. P. Sullivan, J. A. Barnard, and M. L. Weaver, "Room temperature oxidatio of ultrathin TiB_2 films," *J. Mater. Res* ., vol. 17, p. 805, 2002.

[2] **F. Huang**, J. A. Barnard, and M. L. Weaver, "Mechanical characterization of dc magnetr sputtered amorphous Ti-Al Cr coatings," *Surf. Coatings Technol*., vol. 155, p. 146, 2002.

Abhijeet P. Joshi

308 Grace Street, Apt#247
Tuscaloosa, AL 35401

(205) 886-0113
joshi@ua.edu

Objective

Seeking a challenging position as a Metallurgical & Materials Engineer to leverage my practical and research skills to solve real-world materials problems.

Profile

- Career oriented professional with three years of experience in Laser processing of Materials, Microscopy, Coatings, Failure Analysis, Mechanical Testing, Corrosion, Characterization and Tribology.
- Ability to work on complex projects.
- Goal-oriented individual with strong leadership capabilities.
- Organized, highly motivated, and detail directed problem solver
- Excellent writing, speaking, analytical skills and ability to work in unison with the team-based environment.

Education

Master of Science: Metallurgical & Materials Engineering
The University of Alabama, Tuscaloosa AL
Major GPA= 4.0/4.0, Expected Graduation: December 2003

Bachelor of Engineering: Metallurgical Engineering July, 2001
Visvesvarya Regional College of Engineering, Nagpur, INDIA
GPA= 3.6/4.0

Research Experience

August 2001 - Present

Research Assistant
Metallurgical & Materials Engineering (Dr. Ramana R. Reddy)
The University of Alabama, Tuscaloosa AL

- Thesis: "Surface Modification of Titanium Alloy (Ti-6Al-4V) using Pulsed Nd-YAG Laser by Coating with Silicon Carbide and Graphite". It was funded by a grant from National Science Foundation (NSF) and Marshall Space Flight Center/NASA for aerospace applications. It focuses on coating Titanium alloy (Ti-6Al-4V) with Silicon Carbide and Graphite powder to improve the Tribological Properties using pulsed Nd-YAG laser. Surface analysis of coated Titanium alloy (TI-6V-4Al) was carried out using different techniques such as X-ray Photon Spectroscopy (XPS), Auger Electron Spectroscopy (AES), Energy-dispersive X-ray spectrometer (EDS), X-ray diffraction (XRD), Scanning electron microscope (SEM), Tribometer, Atomic Force Microscopy (AFM), Microhardness Testing and Optical Microscopy.
- Performing a study on proposed laser modification of polymers to yield conducting polymers. (A novel approach to yield conducting polymer by surface doping)
- Experience on arc melting technique for alloy and metal preparation, carbon sputtering technique, gold coating technique, BET analyzer, Heat treatment furnaces. Also thermal analysis using Differential Scanning Calorimetry (DSC) and Differential Thermal Analysis (DTA).
- Experience in clean room, vacuum systems and magnetron sputtering.

Industrial Experience

August 2000-April 2001

Research Assistant, VIP Industries, Nagpur, India
Worked on Quality Testing and Data Entry for the project entitled "Mechanical and Morphological Behavior of High Performance Polyolefin Blends" for VIP Industries, Nagpur. Established the best blend of Polyolefins for their Elanza line of suitcase by processing followed by mechanical characterization and morphological studies.

Publication

Abhijeet P. Joshi, Mario Arenas and Ramana G. Reddy, "Surface Modification of Ti-6Al-4V alloy (IMI 318) using pulsed Nd-YAG laser", Processing and Fabrication of Advanced Materials XI Edited by T.S. Srivatsan and R.A. Varin .

ATUL KUMAR

1120 8th Street, Apt # 16
Tuscaloosa, AL - 35401
U.S.A.

Phone: 205-366-9465 (R)
Email: kumar002@bama.ua.edu
Web: www.bama.ua.edu/~kumar002

OBJECTIVE

- To secure a full time position in fuel cells, automobile or engineering related industry, where my multi-technical and analytical skills can be optimally utilized and enhanced

PROFILE

- Ph.D. in Metallurgical and Materials Engineering working on fuel cells
- Experience in CFD modeling using Fluent and Gambit for fuel cells
- Experience on materials, design and modeling for bipolar/end plates in fuel cells
- Advance knowledge of computer languages (FORTRAN, C, C++, etc.) and engineering software packages (Matlab, Maple, etc.)

EDUCATION

- **Ph.D. in Metallurgical and Materials Engineering** — Nov. 2003 (expected)
  The University of Alabama, Tuscaloosa, AL 35487, U.S.A. **GPA: 4.0/4.0**
  Dissertation: Materials, design and modeling for bipolar/end plates in polymer electrolyte membrane fuel cells

- **M.S. in Metallurgical and Materials Engineering** — May 2002
  The University of Alabama, Tuscaloosa, AL 35487, U.S.A. **GPA: 4.0/4.0**
  Thesis: Bipolar plate materials and single cell model for polymer electrolyte membrane fuel cells

- **B.E. in Metallurgical Engineering** — June 1997
  Indian Institute of Technology (formerly UOR), Roorkee, India **Score: 80.1%**
  First Division with Honors

WORK EXPERIENCE

- **Production Engineer** — July 1997 – June 2000
  Jindal Iron & Steel Co. Ltd, Thane, India
  - Implementation of ERP Ramco Marshal (Inv. + Prod) in plant operations
  - Commissioning of H_2 annealing plant (LOI Essen Germany)
  - Suggested new annealing cycles resulting in better properties of finished steel
  - Worked as a shift-in-charge at rolling mill, annealing and galvanizing units
  - Quality testing/control of product, and monitoring of equipment conditions
  - Documentation and data control as per ISO 9002

INTERNSHIP

- **Engineer Trainee** — June 1996 – July 1996
  Visakhapatnam Steel Plant, Visakhapatnam, India

SOFTWARE EXPERIENCE

- Language : Basic, FORTRAN 77, C & C++, VB 6.0, VC ++, SQL
- O. S. : DOS 6.2, Windows 98/2000 & XP, Unix
- RDBMS : Oracle 8.0 + D2K, Sybase 10.x
- Engineering s/w : Matlab 6.1, Maple 6.0, Fluent 6.0, Gambit 2.0, Mathcad, Origin, SigmaPlot, HSC, FACT, FlexPDE

RESEARCH INTERESTS

- CFD modeling and simulation for PEM fuel cell
- Materials, design, and new concepts for bipolar/end plates in PEM fuel cell stack
- Modeling of gas flow-field in bipolar/end plates of PEM fuel cell stack
- PEM fuel cell stack designing, operation and testing
- Micromachining of bipolar/end in micro fuel cells (DMFC)
- Thermodynamics of Fuel Cells
- Catalyst deposition on metal foams
- Metallic and conductive polymer coatings
- Electrochemical corrosion and control
- Laser surface modification

PROJECTS

- Developed CFD model for PEM fuel cell using Fluent on CRAY C94A/264 supercomputer
- Developed CFD model for predicting the optimized channel dimensions for gas flow-field in the bipolar/end plates of PEM fuel cells
- New concepts for bipolar/end plates: Use of metal foams acting as gas flow-field distributor, gas diffusion electrodes and catalyst layer
- Developed CFD model with metal foam in the gas flow-field of bipolar/end plate in PEM fuel cells
- Designed, fabricated, and tested a two-cell prototype PEM fuel cell stack with new bipolar/end plate concepts
- Implementation of ERP package Ramco Marshal (inv + prod. V3.x) in plant operations
- Developed a production management system (PMS) for plant operation in Oracle/D2K
- Hot corrosion studies on nickel based alloy – SUPERNI 75

MEMBERSHIPS AND HONORS

- Member of Tau Beta Pi – Engineering Honor Society
- Active Member of ASM, ECS, and TMS

--X--

DUSTI LYNN LIVINGSTON

341 Hwy 67 S
205-792-7253

Decatur, AL 35603
living008@bama.ua.edu

OBJECTIVE

To obtain a position in the field of Metallurgical and Materials Science Engineering in order to use the knowledge obtained from studying Metallurgical and Materials Science Engineering at the University of Alabama and to learn additional information through experience on the job

EDUCATION

Bachelor of Science: Metallurgical and Material Science Engineering
The University of Alabama
Expected Graduation: August 31, 2003
GPA: 3.2/4.0

WORK EXPERIENCE

University of Alabama Metallurgical and Materials Engineering Department.
Tuscaloosa, AL
Position: Undergraduate Research Assistant supervised by Dr. Viola Acoff
1/2003 to present
Duties: Cut samples with high speed diamond saw, performed microstructural analysis of steel and aluminum alloys. Polished, etched, mount specimen, conducted hardness tests on material specimens, and conducted additional research on the characterization of welds on galvanized steel

University of Alabama Metallurgical and Materials Science Engineering Senior Design Project
Research was conducted on carbon (graphite fiber) in order to see if it would be a feasible alternative to steel in prestressed concreteroadways, and other applications. Sample s from different companies were taken and compared using techniques such as Scanning electron microscope and XRD in order to obtain chemical composition and structure, and conducted necessary test to examine mechanical properties, and the potential for galvanic corrosion.

University of Alabama Foundry
Position: Laboratory assistant
9/2001 to 12/2002
Duties: Make green sand and resin-bonded molds, pour metal, and perform finishing of various products

St. Luke United Methodist Daycare
Tuscaloosa, AL
9/2001 to 12/2001
Duties: Oversee and care children ages 1-3

AWARDS

President's List (Fall of 2002)
Foundry Education Foundation Scholarship (Fall of 2002)

ACTIVITIES

American Foundry Society : University of Alabama Chapter (2000-2003)
The University of Alabama Math Club (2003), Math Tutoring, ASM, and TMS

SKILLS

*Computer Programs and Languages: Matlab, C++, Excel, Word, and Power Point
*Operation of: Induction Furnace, Mold making (green sand and resin bonded), Hardness Tests, Metallography, Galvanic corrosion testing
*Casting of cast iron, aluminum, copper, and brass objects
*Casting methods: gravity casting, investment casting
*XRD diffraction techniques
*Sintering of powder metals
*Thermal Gravimetric Analysis
*Optical microscopy and Scanning Electron Microscopy

CHANDAN MAHATO

(205) 292-8315
mahat001@bama.ua.edu

1214, 12th Street
University Plaza # 51
Tuscaloosa, Alabama 35401

Objective:

A challenging career in materials processing operations, R&D in metallurgical industries.

Qualifications:

2001- Present

Master of Science (Major: Metallurgical and Materials Engineering)
Cumulative GPA: 3.8
The University of Alabama, Tuscaloosa, USA.
(course work expected to be completed by December 2002)

1993 –1997

Bachelor of Engineering (Major: Metallurgical Engineering)
(First class with distinction).
College of Engineering, Andhra University, India.

Experience:

Fall'2001-Present

Graduate Research Assistant, The University of Alabama.
Department of Materials science and Engineering.

- Carrying on research on advanced Aluminum alloys using a novel Magnetic Suspension Melting technique.

Aug'2000 – Aug'01

Junior Research Fellow – "Regional Research Laboratory, a laboratory of The Council of Scientific and Industrial Research"- Government of India.

- Worked on a project related to the synthesis and development of Al based metal – matrix composites for armor applications.
- Developed a mechanical model to simulate the synthesis of metal – matrix composites.

Aug'97 – July' 98

Graduate Engineering Trainee - Bellary Steels and Alloys Ltd., India.

- Designed the Continuous Casting Machine as part of the team from the Company and Engineering Consultants.

Community leadership activity:

Vice- President, Indian Students Association,
The University of Alabama

Professional associations:

Student member: -The Minerals, Metals & Materials Society.
-American Society for Metals.

References:

Will be provided on request.

APRIL PITTS
pitts009@bama.ua.edu

1107 Brookford Place
Muscle Shoals, Alabama 35661
205-799-5779

EDUCATION

Bachelor of Science: Metallurgical and Materials Engineering
The University of Alabama Tuscaloosa, Alabama
Expected Graduation: December 2004

Overall GPA: 2.9
Major GPA: 3.5

EXPERIENCE

Assisted in two research projects University of Alabama, Tuscaloosa, Alabama, 08/02- present
Dr. Doru Stefanescu and Dr. Frank Juretzko, Department of Metallurgical and Materials Engineering
NASA funded "Particle Engulfment and Pushing"
Work included: sample preparation and literature research (online and library)
Industry sponsored "Thin Wall Cast Iron"
Work included: metallographic preparation, hardness testing, mold making, and help during casting operations

Teacher Assistant, University of Alabama, Tuscaloosa, Alabama, 08/03-12/04
Dr. Peter Clark, General Engineering Studies Class
Graded Papers and Projects, First point of contact for students with questions during and after class, and
Microsoft Office Package

College of Engineering Day, University of Alabama, Tuscaloosa, Alabama, 10/01, 02, 03
Responsibilities included: departmental tours, demonstrations (Liquid Nitrogen experiment, Memory Shape alloys, Slip
Castings), and foundry work (molding, casting, and finishing of casting for handouts)

Student Chapter Involvement/Work, University of Alabama, Tuscaloosa, Alabama, 09/01-present
Work Includes: Mold making, casting, and finishing of castings for a wide variety of occasions e.g. elephants,
table pieces, awards, crests, and historic replicas out of aluminum, brass, and/or cast iron.

Oxidation Testing Research Project, University of Alabama, Tuscaloosa, Alabama 09/01-08/02
Dr. Ramana Reddy, Department of Metallurgical and Materials Engineering
Work Includes: Oxidation testing on Aluminum-Niobium by using Thermo Gravimetric Analysis (TGA), preparation of the
oxidized sample, and analyzing the samples with optical microscopy and scanning electron microscopy

Engineering Summer Camp Counselor, University of Alabama, Tuscaloosa, Alabama, 07/02, 07/03
Work Included: Microsoft Office Package, Organized Events, Advised Students,
Judged Competitions

Dean of Engineering's Office Assistant, University of Alabama, Tuscaloosa, Alabama, 06/02-08/02
Dr. Timothy Greene, College of Engineering
Work Included: Microsoft Office Package, Interpersonal Communication Skills, Organizer

Tutored Math and English, Students of Muscle Shoals High School, Muscle Shoals, Alabama 08/00-08/01

SKILLS

Computer Software: MatLab, Microsoft Office Package, Internet
Metallurgical Engineering Research Lab Equipment: Thermo Gravimetric Analysis
Metallographic sample preparation and imaging, molding, casting, and finishing (sand blasting, wheelabator, brushing,
etc.) of small to mid-sized castings
Scanning electron microscopy sample preparation and imaging
Other: Technical Papers, Tutoring, and Excellent Interpersonal Communication Skills

LEADERSHIP

Theta Tau- Co-ed Professional Engineering Fraternity- Scribe, Rush Chair, Administrative Chair, Fundraising Chair, 1st in Pledge Class
ASM/TMS/AFS Student Chapter –Vice President, Secretary, Council Representative
Engineering Week co-chair
Engineering Executive Council- Treasurer, Secretary, Metallurgical and Materials Representative
Society of Women Engineers- Engineering Executive Council Representative, Educational Chair

SCHOLARSHIPS & AWARDS

FEF Scholarship Program
Citation Corporation Scholarship Program
Alpha Lambda Delta Honors Society
National Society of Collegiate Scholars
Dean's List
E.C. Wright Outstanding Freshman Award
Metallurgical Executive Counsel Representative
College of Engineering Scholarship
Arthur E. Focke LeaderShape Award Recipient
ASM/TMS/AFS Student Chapter Activities Award
Metallurgical Engineer Citation Scholar
Million Dollar Band Marching Scholarship
SITE leadership Book Scholarship

ACTIVITIES

LeaderShape Leadership Institute- Champaign, Illinois
Theta Tau National Leadership Conference – Nashville, Tennessee
National TMS Conference – San Diego, California
Theta Tau- Coed Professional Engineering Fraternity- Volleyball Team, Bowling Team, Companies Tours
ASM/TMS/AFS Student Chapter- Foundry work, FEF scholarship, Hold/Run Meetings, Attend Conferences, Engineering Day, Planned Tours, Community work
Society of Women Engineering- Book Sales, Clothing Sales, Engineering Day, Engineering Executive Council Representative, Educational Chair, Hosted Science Olympiad Events
Million Dollar Band- Marched First Trumpet, Women's Basketball Pep Band, Women's Gymnastics Pep Band, Alumni Pep Band, Mobile Mardi Gras Parade

COURSES TAKEN

MTE 101- Introduction to Materials: all faculty
MTE 243- Manufacturing Processes: all faculty
MTE 252- Metallurgical Processes and Calculations: Dr. Gary Warren
Excel, PowerPoint, Word, Internet
MTE 271- Engineering Materials I – Structural Properties: Dr. Richard Bradt
MTE 353- Transport Phenomena in Metallurgy: Dr. Gary Warren
MatLab, Microsoft Office Package, Internet
MTE 362- Thermodynamics of Materials II: Dr. Ramana Reddy
TSIM, Excel, Word
MTE 373- Physical Metallurgy I: Dr. Viola Acoff
Course included: 3 hours per week laboratory. Lab worked included: preparation of samples, Rockwell Hardness Testing, Furnace operations, Technical Papers, Etching, Light Microscopy, and Scanning Electron Microscope (SEM)
MTE 416- Casting and Solidification Processing: Dr. Doru Stefanescu
Course included: 3 hours per week laboratory with technical reports. Lab work included: Furnace operations, molding (pepset, green sand, and investment), melting (aluminum, cast iron, and ductile iron), analysis (metallographic cooling curves), sand testing, and casting simulation software.
MTE 441- Chemical Metallurgy: Dr. Ramana Reddy
MTE 481- Analytical Methods for Materials
X-ray Diffraction, Scanning Electron Microscopy

ELIZABETH COLEMAN SCHOFIELD

E-mail: eschofield11@yahoo.com
4425 Sullivan Street, Apartment 104
Madison, Alabama 35758
Phone: (256) 772-1899

EDUCATION

Bachelor of Science: Metallurgical Engineering
The University of Alabama, Tuscaloosa, Alabama, December 2002
Minor: **Spanish** (fluent)
Overall/Major GPA: **3.61/3.74 Cum Laude**

- Citation Corporation Scholarship
- John P. Duke Outstanding Senior Award
- University of Alabama Presidential Scholarship
- National Merit Finalist-National Merit Scholarship
- Foundry Educational Foundation Scholarship

EXPERIENCE

Graduate Student Researcher, Universities Space Research Association,
NASA Marshall Space Flight Center, Huntsville, Alabama, September 2002 – December 2002

- Fabricated aerogel molds with particulate additions for metal casting
- Produced directionally solidified thin section castings using aerogel molds

Intern, Virginia Space Grant Consortium / Undergraduate Student Research Program,
NASA Marshall Space Flight Center, Huntsville, Alabama, June – August 2001, June – August 2002

- Prepared aerogel cylinders and monoliths for use as casting molds and mold inserts
- Coated resin bonded sand molds with sol-gel solutions and conducted permeability tests
- Collected cooling curve data for aluminum alloys solidifying in aerogel molds, gel coated sand molds, and sand molds with aerogel inserts
- Produced directionally solidified aluminum alloy castings using aerogel molds

Intern, Caterpillar, Inc., Mapleton Foundry Metallurgical Laboratory, Peoria, Illinois, May 2000 – August 2000

- Collected thermal and stochiometric data for compacted graphite cast iron using Advanced Thermal Analysis, SinterCast Stand Alone and SinterCast End of Pour systems
- Analyzed thermal and stochiometric data using a neural network, Xpert Rule Miner, to determine casual relationships between variables of interest in order to refine the compacted graphite recipe
- Updated the Metallurgical Laboratory Audit Book with color photos and current part numbers
- Performed defect analysis on scrap and salvage data.

Undergraduate Research Assistant, University of Alabama Dept. of Metallurgical and Materials Engineering
August 2000 – May 2002, Scholastic Year.

- Performed computer-aided metallographic analysis on thin-walled ductile cast iron
- Learned simulation techniques for metallurgical systems
- Facilitated sessile drop experiments

RELEVANT COURSEWORK

Casting and Solidification Processing
Metallurgical Process and Calculations
Transport Phenomena in Metallurgy
Materials Selection in Engineering Design
Corrosion Science and Engineering
Physical Metallurgy
Mechanics of Materials
Chemical Metallurgy
Matlab
Calculus
Thermodynamics and Phase Diagrams
Commercial Spanish
Microsoft Office
Analytical Differential Equations
Analytical Methods for Materials

SIGNIFICANT ACCOMPLISHMENTS

Vice President of the University of Alabama Student Chapter of **TMS/ASM/AFS,** August 2000 – May 2001
Member, TMS/ASM/AFS, Society of Women Engineers, Golden Key, Alpha Sigma Nu Honor Society
Black Belt, Shin Nagare Karate and American Freestyle, Ranked in Eagle Claw, Chin Na Level

References available upon request.

NIRMAL THAKKAR

319 Grace Street, Apt. # 22
Tuscaloosa, AL 35401

Home Ph. : (205) 752 8864
Email : nirmalthakkar78@yahoo.com

OBJECTIVE

To obtain a position in industry using my problem solving skills and academic training in the field of Metallurgical & Materials Science Engineering.

EDUCATION

Master of Science : Metallurgical & Materials Engineering
The University of Alabama, Tuscaloosa, AL
Expected Graduation: May 2004
Cumulative GPA: 4.00 / 4.00
Courses: SEM, Mechanical Behavior of Materials, Phase Equilibria, Thermodynamics, Transport Phenomena, Materials at Elevated Temperatures.

Bachelor of Engineering : Metallurgical Engineering
The Maharaja Sayajirao University, Baroda, India
Graduation: May 2001
Cumulative GPA: 3.73 / 4.00
Courses: Structural Metallurgy, Alloy Steels, Selection of Materials & Failure Analysis, Nuclear Metallurgy, Principles of Metal Joining, Electrometallurgy & Corrosion, Heat Treatment , Non-destructive Testing of Materials, Metallurgical Instrumentation, Foundry Technology, Powder Metallurgy, Physical Metallurgy, Steel Making, Non-ferrous Extractive Metallurgy, Furnace Technology, Mechanical Metallurgy, Iron Making , Industrial Ceramic Materials , Analytical Techniques in Metallurgy, Transport Phenomena, Plastic Deformation of Metals, Principles of Extractive Metallurgy, Fuel & Energy Sources in Metallurgy, Metallurgical Thermodynamics, Mineral Dressing, Selected Engineering Materials, Materials Science, Mathematics.

Related course work:

- Worked on project "Quantitative Microstructural Evaluation of Metallographic Samples by Image Analysis Technique"
- Paper titled "Advanced Applications of Metallic Materials" presented at REC-Rourkela, 2000
- Won first prize for paper titled "Amorphous Silicon – A new electronic material" presented at RIT-Jamshedpur, 2001
- Paper titled "Smart Materials for aerospace applications" presented at IIT-Roorkee, 2001
- Won third prize for paper titled "Computers in NDT" presented at ISNT Meet (Baroda Chapter), 2001

EXPERIENCE

The University of Alabama, Tuscaloosa, AL. August 2002-Present
Graduate Research Assistant, Department of Metallurgical and Materials Engineering
Present Research work: Synthesis and Characterization of Ceramic/Composite Nanopowders using Thermal Plasma Processing. TiB2 Nanopowders with particle size less than 100 nm using a non-transferred arc D.C thermal plasma reactor. Characterization of nanopowders using SEM, TEM, XRD.

Gujarat State Fertilizers & Chemicals Ltd., Baroda, India. March 2002 – August 2002
Junior Metallurgical Engineer
Failure Analysis & Non-destructive Testing was carried out in plant to determine the causes of failure for parts and equipments. Metallographic samples were prepared for observation. Ultrasonic Testing, Radiographic Testing, Magnetic Testing were used for Non-destructive Testing.

SKILLS

Applications including Windows 95/98/2000/ME/NT/XP, MS Word, MS Excel, MS Powerpoint, DOS
Languages: Basic , C, C++, Java (Core), Unix, Cobol
Internet : Netscape navigator, Internet Explorer

REFERENCES available upon request

Ocean Engineers

Brian A. Campbell

Bricampbel@aol.com
Bcampbe2@bcc.cba.ua.edu
104 W. Beach Place Apt. #313 Tampa, FL 33606
Home: (813) 258-6495 Cell: (813) 334-1373

OBJECTIVE: Seeking a Medical or Pharmaceutical Sales Representative position where my initiative, outgoing personality, knowledge, tenacity, and account management skills are utilized on a daily basis.

EDUCATION

Present — **The University of Alabama**, Tuscaloosa, AL
Master of Business Administration (MBA)
Concentration: Strategy; Graduation: December 2001

May 1994 — **The United States Naval Academy**, Annapolis, MD
Bachelors of Science in Ocean Engineering

EXPERIENCE:

May 2000 to August 2001 — **Account Executive and Operations Manager,** *KView, Inc. Tampa, FL*
Hired as a summer MBA intern and became a full-time National Account Representative and Operations Manager at end of summer. Company is a start-up specializing in the development of audiovisual corporate training and education programs for Web and CD-ROM deployment.

- Redrafted company business plan for successful round of venture capital funding.
- Established national accounts ($250,000 annually) through cold calling and networking.
- Implemented internal proposal and bid procedures and sales force training on needs identification, qualifying, prospecting, and negotiation.
- Managed 40 person Operations Department responsible for the creative development and delivery of product information in rich media (audiovisual) format for marketing, training, and consumer education.
- Technical Sales Advisor for ten person sales force dispersed throughout U.S., Canada, and Europe. Responsible for creating and delivering presentations, developing statements of work, and coordinating project production scheduling and delivery.
- Recognized innovator with strong analytical and strategic planning skills.

February 1997 to June 1999 — **Project Manager**, *U.S. Navy Afloat Planning Systems (APS), Honolulu, HI*
Supervised and managed 12 computer hardware and software technicians.

- Responsible for Tomahawk Cruise Missile Afloat Planning System (APS) and Satellite Digital Imagery Workstation (DIWS) operations including administration, maintenance, training, and operation.
- Planned and executed Tomahawk contingency operations in support of National Command Authority (NCA) tasking against terrorism.
- Developed and operationally tested new Tomahawk mission planning and satellite imagery download process resulting in a 50% decrease in planning time. Completed by motivating team to brainstorm and think "out of the box."
- Identified Navy-wide computer database problems; proposed and implemented multi-million dollar cost savings solutions.
- Supervised installation and testing of new hardware and software systems and prioritized tasks for creating new classified information databases.

June 1994 to February 1997

Division Officer, *USS O'BRIEN (DD 975), Yokosuka, Japan*

Supervised and managed 16 electronic and data systems technicians.

- Responsible for multi-million dollar shipboard missile and fire control systems.
- Implemented preventive maintenance program for hardware systems and coordinated hardware and software upgrades, operational testing, and evaluation.
- Qualified senior department level combat position (Tactical Action Officer). Position normally awarded to Officers six years my senior.
- Analyzed and managed 20k cash account funds for ship's recreation account.
- Planned, organized, and coordinated ship public relations activities.

Computer Experience

Languages: Visual Basic, SQL; **Operating Environments**: UNIX, All Windows OS; **Business Tools**: Expert – Presentations, Spreadsheets, Word Processing, Groupware, Database; **Schools**: UNIX based computer system operation, system production, and database management.

Qualifications

- Engineer-in-Training (EIT) Certified
- DOD Security Clearance: Top Secret

Awards and Honors

- Awarded two Navy and Marine Corps Commendation Medals.
- Awarded two Navy and Marine Corps Achievement Medals.
- Nominated for Navy-wide "Arleigh Burke Leadership Award" for excellence through leadership by example.

References

Available upon request.